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Enablers to Ensure a Successful Force Centric Logistics Enterprise

01 April 2004

by

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Prepared for: Naval Postgraduate School, Monterey, California 93943

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A LOGISTICS REVOLUTION

There is an ongoing logistics management revolution in the Department of Defense that is taking weapons systems life-cycle support from the shadow of acquisition into the daylight of a highly focused success oriented enterprise. Although there are many laudable attributes in this enterprise such as Force-Centric Future Logistics and Performance Based Logistics, the surety of achieving success in the logistics revolution will be a certainty by addressing and correcting certain structural weaknesses that have compromised excellent logistics performance for decades. It is the intention of the author to highlight those weaknesses and recommend corrective actions.

CHANGE THE CULTURE TO ACHIEVE FORCE CENTRIC LOGISTICS ENTERPRISE (FLE) SUCCESS

A true logistics enterprise that pervades all levels of the DoD and each of the armed services will maximize operational availability. That enterprise will feature improved reliability, reduced maintenance and replenishment cycle times, reduced logistics footprint and a more rigorous approach to life cycle cost management. The imperative that will enable a new logistics enterprise is cultural change. Critical analysis of logistics failures shows the root causes to be cultural failures. We must change the rewards and incentives for every activity that impacts logistics. The Defense Acquisition Executive Summary (DAES) must be changed to include Operational Availability as a key baseline target and at the same time this target must have service-wide commitment. The Army is on the right track by requiring reliability as a key performance parameter in the acquisition process.

Overcoming cultural inertia is difficult. As a result of the rewards that are presently in place, we under-invest in logistics, proliferate configurations, and most importantly, we don't match spares inventories to demonstrated failure rates, and we tend to accept contractor claims such as reliability at face value. While Performance

Based Logistics has the capability to improve the correlation of inherent reliability and demonstrated reliability, it is essential to have a mandatory steadfast focus in this area for consistent progress. Operational Requirements offices pursue goals of higher, faster and further, without considering the effect on logistics elements, logistics footprint, acquisition timeline, program cost and program complexity. It is significant to note that although we consistently and are presently pursuing the aforementioned behavior, once the system is operational we are content with an 80% MC rate with certain subsystems consistently degrading MC and never ask why we bought capabilities that are marginalized after fielding. Contract officers take the path of least resistance and underplay logistics incentives. Engineers focus on performance and minimize the effects on reliability. We can see that the wrong incentives have produced compromised logistics. In and effort to improve logistics performance, we have embraced PBL, but the best-written contract cannot correct bad logistics behavior or the shortcomings of legacy systems that are old, poorly designed or not well understood.

Our logistics culture in our new enterprise must be one where comptrollers, contracts specialists, lawyers, engineers, logisticians and program managers make policy and decisions based on success-oriented logistics outcomes. Furthermore, those who review programs must become more informed about logistics issues and provide a robust logistics check and balance. Additionally, independent Logistics Review Groups (LRG) must be revitalized in all the services. We need to change to a culture where everyone's efforts add value to the entire enterprise and not just a part. Our culture must become one where all the players in the logistics enterprise are rewarded for the same thing: meeting operational availability targets that provide the battle-space commander with the ability to engage and win.

THE CURRENT LOGISTICS ENVIRONMENT HINDERS FLE

Cost, Schedule and Performance

The most significant inhibitor to a successful logistics enterprise is that Program Managers are rewarded for COST, SCHEDULE and PERFORMANCE only. There is the emerging trend to include supportability or reliability as a measure and PBL requires PM leadership that could lead to modifying the Defense Acquisition Executive Summary (DAES). The natural tension between program cost, schedule, and performance and logistics funding in the absence of operational availability targets as a fourth requirement in the DAES, precludes any opportunity to achieve a true logistics enterprise.

Not Acknowledging the High Cost of Logistics

The logistics component of weapons system ownership is resource intensive. Policies, manpower, funding and logistics authority must correspond to the realities of the resources necessary for supporting a weapon system throughout its life. The intensity of life-cycle support costs must be factored into acquisition planning processes at every level. For example, the estimated cost of ownership of an F/A-18 is $4M per year. That is more than $80M per airplane for 20 years of ownership in constant year dollars. According to a NAVAIR brief “Relating Business Processes To Warfighting Outcomes” to the CNO on 8 January 2003, the current cost to operate an F/A-18C for one hour is $9,700 and for the F-14D it is $20,000 per hour. Recognizing the true costs of the logistics enterprise would raise the level of awareness at all levels and promote the need for better performance/cost/support trade-offs.

In this regard, successful implementation of PBL has the potential to provide more precise knowledge and management rigor.

Wrong Rewards for the Operating Forces

In the operating forces, the operational chain and the operators are rewarded for hours flown, hours steamed, sorties generated and other operational measures of success, but not for logistics performance or husbanding very expensive airplanes or ships or tanks, etc. In the Navy each succeeding Carrier Group Commander strives to outdo their predecessor's measures of success by flying more hours, getting more traps and sorties. This behavior accelerates the wear-out of systems and the cost of support. We must change the rules and reward faithful type-commander support and in turn reward fleet operating units for good logistics support and well executed maintenance.

HOW TO ACHIEVE FLE SUCCESS

Establish a Program Baseline Ao

First I recommend we establish the requirement for all Program Executive Officers and Program Managers to include a Readiness Target (A_o) in the Defense Acquisition Executive Summary Baseline. Additionally I recommend that each chief of Staff of each service commit to meeting program readiness targets.

Program Actions Must Enhance Reliability, Maintenance and Cycle Times

Every echelon of acquisition and logistics from ALT to the operating unit must add value to the logistics product. No action should be taken that reduces or compromises reliability, adds to maintenance cycle time or increases maintenance actions or increases configurations. Acquisition and logistics activity should be a joint enterprise.

Verify Logistics Performance through Testing

Testing specifically for logistics is a particularly important scheme that will assure the performance of enterprise elements. Currently, this is an area of weakness that can easily be improved by making it a robust requirement funded to the necessary levels.

Stop Configuration Proliferation

An important tactic is to minimize configuration changes. Too often, we forward-fit but because of funding constraints we do not retrofit. Unnecessary changes only serve to keep logistics in a continuous state of instability. In general, modification practices require duplication of all the logistics elements. We must avoid logistic dislocations due to insufficient funds for modification kit hardware and installations and the inability to modify the entire inventory.

Change the O&S Budget Process

While we are attempting to advance logistics technology on all fronts, the logistics budget process remains a dinosaur and seriously undermines the logistics enterprise. All programs are the victims of asymmetric funding. Program acquisition funds are for three years and logistics funds are for one year and are in no way tied to any specific program at the appropriation level. The allocation of O&M funds to programs and other logistics budget activities is a tug-of-war between the DoD, the service, the SYSCOMS, and the fleet operators. In this stressed funding environment, operating hour account managers tend to spend into logistics accounts. To make matters worse, O&M is becoming *THE* budget target of opportunity more than ever. It is significant to note that many systems have reached the end of their production and as a result, the procurement dollars used to subsidize sustaining engineering, stops with the end of production. However, the need for this critical funding continues. The present culture just doesn't see logistics with an appropriate sense of priority and the comptrollers are no exception. O&M is still seen as the bill payer to smooth the rough edges of the budget activity process throughout the fiscal year.

What should we do about this situation? I propose that we totally revise the O&M account: First we should identify logistics funds for all those categories identified for program life-cycle support by logistics elements and reprogram those funds as we do procurement money. Next, we should fund general logistic support elements such as CALS, JEDMICS etc. in what we would call a "Weapons Systems Support Account" as

the new priority Operations and Maintenance effort in a new Operations and Support Account. Then I would fund the routine O&M activities such as POL and pencils out of a named lower tier O&M account. If we were to adopt these measures, we would be more efficient in the allocation of program support funds, have greater accuracy of program cost requirements and be better able to depict, articulate and defend resource requirements in a new logistics enterprise.

Ensure Fidelity in the IPPD, SE and IPT Processes

Employing the current tactics of Integrated Planning and Process Development, Systems Engineering, and Integrated Process teams are important steps in engaging the future logistics enterprise, but we have to apply more fidelity in their execution. When we examine teaming from the logistics and program perspective, we see the need for an expanded team whose players include not only logisticians, systems engineers, contracts, lawyers, comptrollers, but also Congressional Members, Staffers, field activities and industry. While we have shown we desire producing a system in the shortest time, with the best performance, the highest quality, and the best cost, inititiatives such as spiral development lead to incomplete logistics.

Require Technical Education for Logistics Managers

An important change to be made in our logistics culture is to change the educational requirements of our logisticians. I propose that we establish a two-tier system for logisticians. The first tier would require engineering graduates (ME, EE, IE, etc.) for acquisition logistics and the second tier would require graduates with general BS/BA degrees combined with experience or additional technical course work for sustaining logistics. Weapon systems are more complex, logistics support systems are more complex, and team communications are more complex. Moreover, decisions at all levels have become more complex and mistakes are more costly than ever. The Congress has recognized this and as a result passed the DAWIA. In this environment, the logistics manager has to be well educated in technical matters as well as business matters. Not only must logisticians have a technical background they should have

strong analytical skills and be critical thinkers. Graduate education for senior logistics management positions should be mandatory. During the time I was the Assistant Commander for Logistics and Fleet Support at the Naval Air Systems Command, most of the new logistic interns were graduate engineers. This is a trend that must continue. I recognize that we are a few years away from this posture, but we must go there. We urgently need balanced viewpoints in the value-net working trade-off decisions. Specifically logisticians must be able to understand systems functional analysis: functional allocation, reliability allocation, complexity analysis, cost analysis and so on. In addition they must have some knowledge of modeling and simulation and spreadsheets.

Change the Civil Service Classification of Logisticians

Now this brings me to an interesting point- All civilian logisticians in all the services, regardless of their levels and kinds of education are classified as 346s, an administrative function. We need to correct this serious disconnect by reclassifying logisticians as professionals along with engineers if we are serious about walking the talk.

CONCLUSION

Cultural barriers have continued to undermine logistics practices. No future logistics enterprise can succeed without changing rewards, incentives and instructions.

Because of the technical complexities in our weapons systems and modern culture, logisticians must be able to interact with engineering at all levels so that they may be proactive, credible and influential. This can be achieved by upgrading the technical education of logisticians and adopting the two-tier system I have proposed. Logistics culture will greatly improve by tearing down the barriers to knowledge, confidence and trust. To properly provide for support of increasingly expensive weapons systems, our budgetary processes must be changed so that support funds are a direct part of any program and bring fiscal balance for the whole and not the part. We must use our weapon systems in peacetime operations so that we don't accelerate wear out. Incorporating these changes will produce a panorama of skill sets that will enable a robust and successful future logistics enterprise that will ensure battle-space dominance.

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